



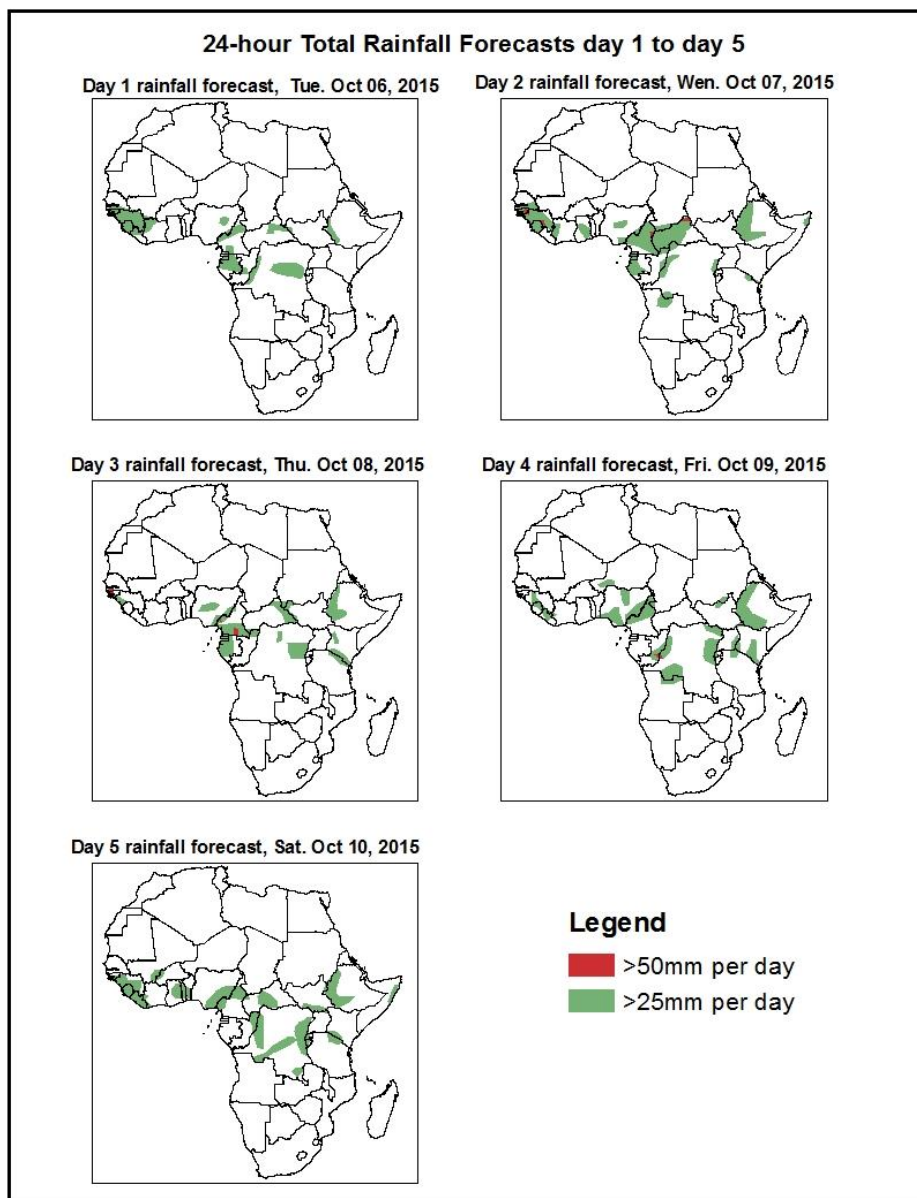
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall and Dust Concentration Forecasts

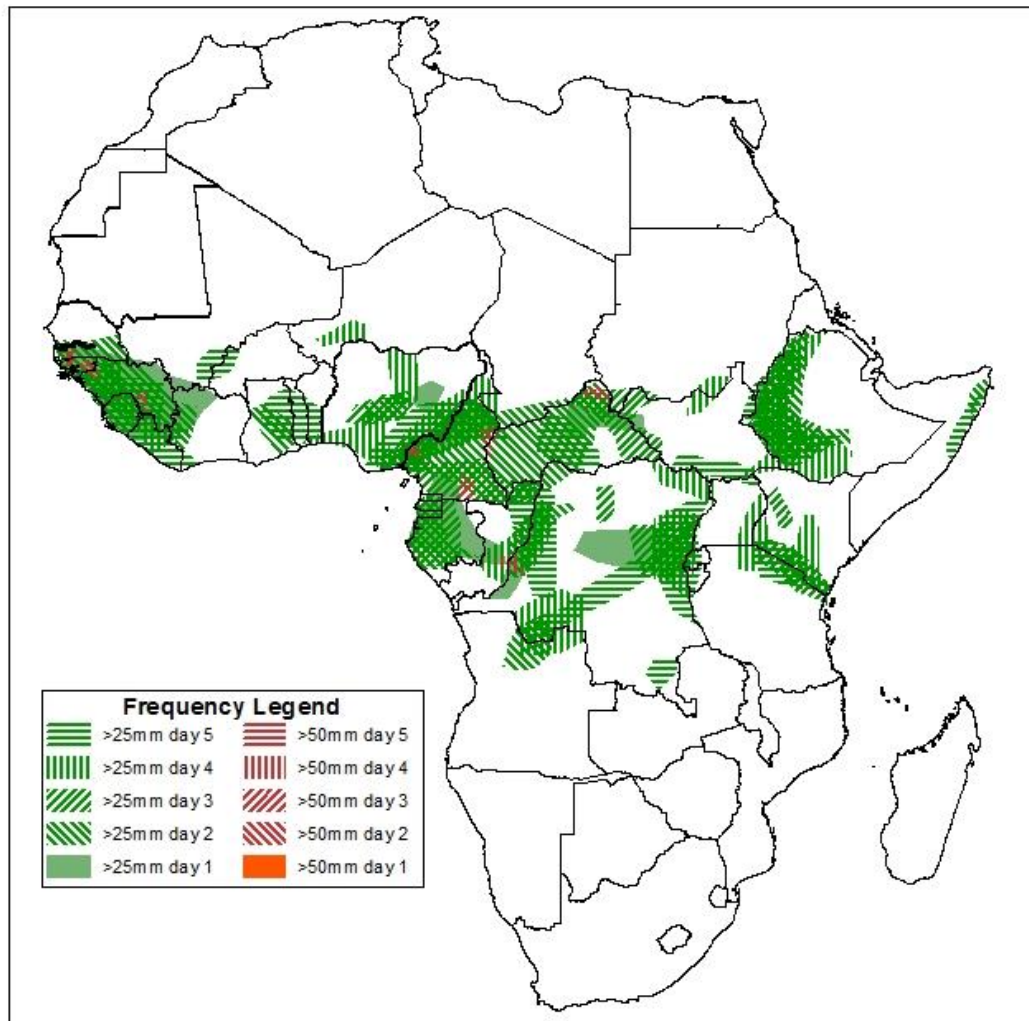
Valid: 06Z of Oct 06 – 10Z of Oct 07 2015. (Issued on October 05, 2015)

1.1. 24-hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of high probability of precipitation (POP), based on the NCEP/GFS, ECMWF and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



Five Days Rainfall Forecast Summary 06 Oct - 10 October, 2015

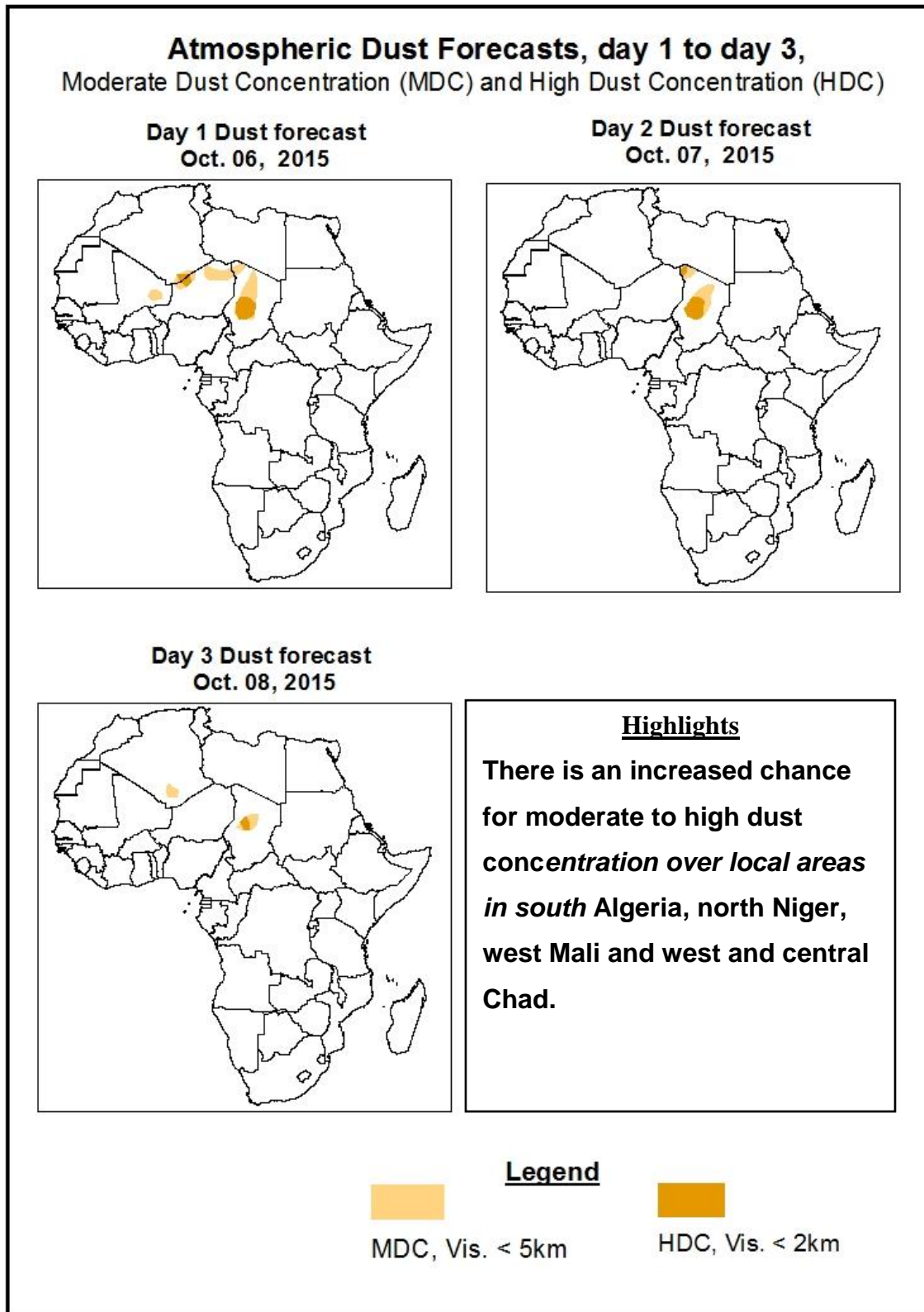


In the coming five days, monsoon flow from the Atlantic Ocean with its associated convergence across West and Central Africa will continue enhancing rainfall in southern Senegal, Guinea-Bissau, Guinea-Conakry, Sierra Leone, Liberia, South Mali, West Ivory Coast and Centre of Ghana, eastern part and central Nigeria, large part of Cameroon, Gabon and Congo, large area of CAR, portions of south Chad and some parts of Southern Sudan, large area of DRC will receive rainfall. Seasonally moderate to heavy rainfall is also expected to continue across eastern Africa, portion of Tanzania, Uganda and Kenya, west of Ethiopia and east of Somalia, Rwanda and Burundi.

1.2. Atmospheric Dust Concentration Forecasts

Valid: 12Z of Oct 06 – 12Z of Oct 10, 2015

The forecasts are expressed in terms of high probability of dust concentration, based on the Navy Aerosol Analysis and Prediction System, NCEP/GFS lower-level wind forecasts and expert assessment.



1.3. Model Discussion, Valid: 06 – 10 October, 2015

The Azores high pressure system over Northeast Atlantic Ocean is ridging toward the African continent with a central pressure value up to 1025 mb and is expected to decrease gradually in 48 hours while moving further westward to the Atlantic Ocean with a central pressure value of 1022 mb. The High pressure system will continue moving from its position toward far away its climatological position without significant changes of central pressure in 120 hours the end of the forecast period according to the GFS model.

The ridge associated with the St Helena high pressure system over the Southeast Atlantic Ocean pressure values are expected to vary slightly between 1024 mb and 1022 mb in 72 hours. It will continue to extend its influence to southwestern Indian Ocean weather pattern by changing its position and will intensify slightly before the subtropical high pressure systems resume their climatological position towards the end of the forecast time period with a central pressure value reaching 1029 mb.

The Mascarene high pressure system will decrease significantly within 48 hours with central pressure values varying from 1030 mb up to 1022 mb then a relaxation will be expected while moving toward western Indian Ocean; the central pressure value is expected to rise up to 1026 mb at the end of the forecast period according to the GFS model.

A thermal low with central pressure value between of 1008 mb and 1010 mb are expected to propagate westward through 24 to 120 hours. The low pressure over Chad in 48 hours will slightly filling up and covering region between Mali, Niger and Sudan with a central pressure value of 1009 mb towards the end of the forecast period while move westward.

At 925 mb, a cyclonic circulation over Niger is expected to propagate towards the coastal area of Senegal across Mali through 24 to 120 hours. Strong Zonal wind convergence is expected to prevail across Chad, Niger and Mali during the forecast period. Meridional wind convergence is expected to remain active in the region between Sudan and Northeast DRC towards western coast of Ethiopian region during the forecast period.

At 850 mb level, a large cyclonic circulation over Niger is expected to propagate towards coastal areas of Senegal by passing through Mali during the forecast period.

At 700 mb level, a persistent easterly flow is expected to propagate westwards in the region between central Sudan toward the gulf of Guinea during the forecast period.

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2.0. Previous and Current Day Weather over Africa

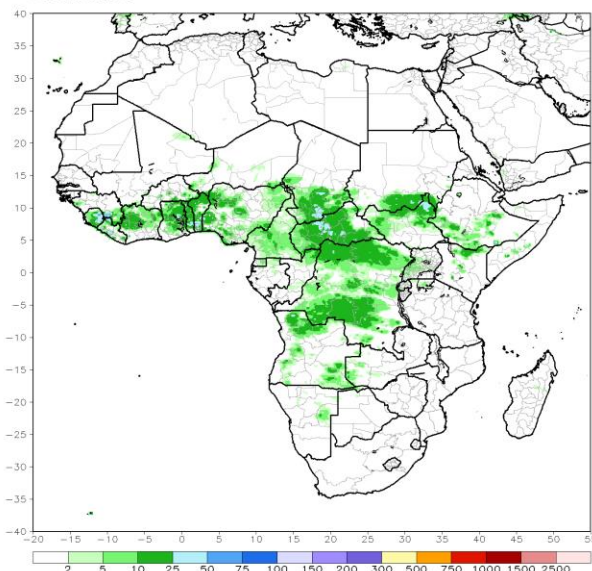
2.1. Weather assessment for the previous day (October 04, 2015)

Moderate to locally heavy rainfall was observed over Liberia, Sierra-Leone, west Ghana, south Togo, south Chad, central CAR and northern South Sudan.

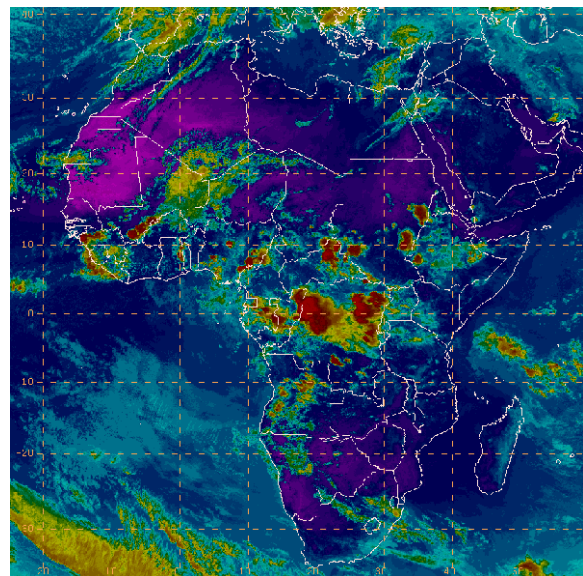
2.2. Weather assessment for the current day (October 05, 2015)

Intense clouds are observed in some parts of West Africa and central Africa, south Senegal, south-east Mali, central Nigeria, west Cameroon, north CAR and many places in east African countries: Eastern South Sudan, central and east of DRC, Rwanda, Burundi and Uganda.

RFE2 Daily Total Rainfall (mm)
Period: 04Oct2015



IR Satellite Image (valid 1630 of October 05, 2015)



Previous day rainfall condition over Africa (top Left) based on the NCEP CPCE/RFE and current day cloud cover (top right) based on IR Satellite image

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